ORDNANCE FIELD MANUAL

UNEXPLODED BOMBS ORGANIZATION AND OPERATION FOR DISPOSAL

CHANGES No. 1

WAR DEPARTMENT,
WASHINGTON 25, D. C., 20 March 1944.

FM 9–40, 20 October 1943, is changed as follows:

1. GENERAL. a. A compilation based on many air raids shows that from 5 to 10 percent of all bombs fail to explode **because of malfunctioning of bomb fuzes, or, as in the case of time bombs, through the deliberate intent of the enemy.** The proportion of * * * and lower morale.

* * * * *

c. To meet the bomb disposal problem it is necessary to have trained bomb disposal units to dispose of unexploded bombs. Anyone assigned to * * * bombs without detonating.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

3. BASIS FOR PERSONNEL REQUIREMENTS. Requirements for bomb disposal personnel cannot be based on **an** army or corps, since the need for protection against unexploded bombs depends primarily upon probable targets within an area. Under the present War Department policy, the commanding general of each defense command, **service commands which are not included in defense commands,** department, base, or theater of operations **is responsible for disposal of**

*This change supersedes Training Circular No. 68, War Department, 1942.

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unexploded bombs and will estimate his requirements for bomb disposal personnel and make appropriate recommendations to the War Department. **The commanding general of each defense command is authorized to delegate his responsibilities in connection with bomb disposal to the commanding generals of the service commands.**

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

6. TRAINING AIDS (Superseded.) **a.** (See FM 21–6 and 21–7.) The Ordnance Department has available the following training aids for use in instructing military and civilian personnel in bomb reconnaissance and reporting:

(1) Training Films. Available at the training film library in each service command or at sublibraries: "UXB," TF 9–618.

(2) Film Strips. Available at the training film library in each service command or at sublibraries: "Bomb Reconnaissance and Reporting," FS 9–30, 9–31, 9–32, 9–158, 9–159, 9–160. "Identification of Foreign Bombs," FS 9–161, 9–162, 9–163, 9–164.

(3) Ordnance Field Service Circular No. 5, 1 January 1943, "Bomb Reconnaissance and Reporting." Available at local ordnance distribution depots.

(4) Miscellaneous charts for bomb reconnaissance instruction. Available at Office of Chief of Ordnance, Military Training Division, The Pentagon, Washington 25, D. C.

b. The above aids can be secured upon request by commanders charged with the responsibility for bomb disposal. These visual aids are most effective when used by qualified bomb disposal officers.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

8. TECHNICAL INFORMATION SECTION.

* * * * *

b. Expediting Reports. In order that * * * Ordnance in Washington. **Whenever bomb disposal personnel become aware of any fact which affects or is likely to affect the safety of other bomb disposal personnel or units, such information will be reported at once through technical military channels; headquarters in these channels will relay this information upward through channels, and also advise all bomb disposal personnel under its control.**

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[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

15. MILITARY. The general mission * * * out as follows:

a. By the Ordnance Department. (Superseded.)

(1) The Ordnance Department is charged with the overall responsibility for the disposal of all unexploded missiles and will assist the commanders in discharging their duties in the disposal of unexploded bombs, through the furnishing of—

(a) Trained bomb disposal personnel and bomb disposal units to assist the ordnance officer of the command when requested by the commander and approved by the War Department.

(b) Necessary literature and other aids to the bomb disposal personnel for use in bomb reconnaissance training.

(c) Information with regard to technical procedures and methods to bomb disposal personnel for their use in bomb disposal operations. The training of these units

when they have been assigned will be continued by the commander charged with the responsibility for disposal of unexploded bombs.

(2) The Ordnance Department is assigned the following secondary missions:

(a) The supervision of research in methods of disposal in coordination with appropriate technical agencies.

(b) The preparation of Technical Manuals and other literature in coordination with appropriate technical agencies for distribution to the Army and the Office of Civilian Defense.

(c) The provision of advice and information on training methods and organization to the Army and the Office of Civilian Defense.

(d) The provision of advice to the Assistant Chief of Staff (G–1) on the assignment of trained bomb disposal officers.

(e) Acting as liaison for the War Department with the Navy Department, the Office of Civilian Defense, and other civilian agencies.

(f) Operation of the Bomb Disposal School for the training of selected personnel in disposal methods and allied subjects.

(g) Direct correspondence on technical matters with bomb disposal officers of service commands, defense commands, oversea departments, bases; and theaters.

* * * * *

c. By defense commands. **(1)** Coordination and training of military personnel and units assigned **in bomb reconnaissance and reporting.**

(2) Coordination of operational activities with military commands and **Office of Civilian Defense in the establishment of adequate reporting systems.**

* * * * *

d. By service commands not included in defense commands. **(1)** The training of all military personnel within the limits of the service command **in bomb reconnaissance and reporting.**

(2) The training of necessary civilian defense personnel in connection with **bomb reconnaissance and** bomb disposal activities.

* * * * *

e. By overseas departments, base commands, task forces, and expeditionary forces.

* * * * *

(2) Training activities, to include training of necessary civilian and military personnel **in bomb reconnaissance.**

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

17. GENERAL. For the sake of simplicity, operations will be considered in **four** sections: bomb reconnaissance, incident reporting, evacuation and protective works, **and access and removal.** Information pertaining to the **properties and other characteristics of explosives will be found in appendix I.**

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Figure 2. (Page 13). Change to read, ***Hole of entry for various surfaces.***

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Figure 3. (Page 14). Change to read, *Hole of entry* ***in hard earth.***

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Figure 6. (Page 18). Change to read, ***Maximum penetration to which bombs are considered to be unburied.***

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Figure 16. (Page 36). This figure supplements figure 2 on page 13.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

25. CAMOUFLETS (fig. 18).

* * * * *

a. Type A. The type A camouflet is usually formed when **a small** bomb has penetrated 12 feet of hard clay. The indications of this type will be—

* * * * *

b. Type B. The type B camouflet is usually formed when **a small** bomb has penetrated 16 feet of hard clay. The indications of this type are:

* * * * *

c. Type C. The type C camouflet is usually formed when **a small** bomb has penetrated 21 feet of hard clay. There will be * * * kilogram unexploded bombs.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

29. PRELIMINARY REPORT TO CONTROL CENTER. (Superseded.)

After an air raid, many unexploded bombs and missiles may be found.

a. On a civilian installation. The finder should report the object to the nearest air-raid warden or policeman, who will report the incident to the nearest control station, and a civilian bomb reconnaissance agent will be dispatched to the scene of the incident as rapidly as

possible to investigate and report whether the incident is an unexploded bomb or not. If an unexploded bomb is found, the controller recommends a priority for its disposal and notifies the bomb disposal unit responsible for his area, whereupon the commander of the unit, or the bomb disposal officer on the staff of the ordnance officer, approves or disapproves the recommended priority and puts the bomb in its proper place in his operations schedule. The Office of Civilian Defense is thereby the agency which gathers and transmits information pertaining to unexploded bombs.

b. On a military installation. The soldier discovering the object will report directly to the commanding officer of the establishment, who will be responsible for sending a bomb reconnaissance officer to the scene of the incident to determine whether it is a bomb or not. If it is a bomb, the commanding officer should suggest a priority of handling and notify the nearest civilian control center which in turn will notify the bomb disposal unit. The civilian control center is used as the clearing house for information in the chain of communication, but will not be considered as a part of the military chain of command. Final authority rests with the bomb disposal officer under the jurisdiction of the commanding general of the defense command or service command.

c. Modifications. Outside of the continental United States where the majority of bombs may not necessarily fall in civilian areas, some modifications of the above system may be established, but the essential principles outlined above should be followed.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

33. GENERAL. (Superseded.) Often it will be impossible to render the bomb safe immediately, and in these

cases evacuation of personnel and application of protective works will greatly reduce the damage done should an explosion occur. Experience abroad has shown that unexploded bombs require large scale evacuation of people, impairing their morale and causing adverse comment against the military forces for not rendering protection against this phase of the enemy's action and forcing key factories to shut down until the bombs can be disposed of. For this reason, proper evacuation of personnel is an important phase of bomb disposal.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

35. PROTECTIVE WORKS. a. Use. (Superseded.) Unexploded bombs cause the suspension of such urgently needed utilities as water, power, light, gas, and telephone, and seriously complicate the transportation system, with consequent adverse effect on both civilian and military efficiency. The danger to utilities can be greatly reduced by protective works. Protective works are used, as a rule, only in the case of category A bombs (par. 30a). They have two main functions:

(1) To allow work to continue in buildings or factories while the bomb is being removed.

(2) To allow the bomb to be reclassified in lower category due to the protective structures.

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

76. RESPONSIBILITIES. The bomb disposal staff officer will be a qualified ordnance officer acting as an assistant to the ordnance officer on the special staff of each **commander charged with the responsibility for disposal of unexploded bombs** and will have the following duties:

a. When attached to an army or corps. **(1)** He will act as adviser to the **ordnance officer on whose staff he serves** in all matters pertaining to bomb disposal.
(2) He will collect, investigate, and forward through the proper channels all bomb disposal intelligence **to the Chief of Ordnance.**
(3) (Superseded.) He will exercise direct technical supervision of bomb reconnaissance training, and the continued training of assigned bomb disposal units.

* * * * *

(5) In the absence of trained bomb disposal personnel, he will requisition labor and equipment for any necessary **bomb disposal** operations.

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

93. HIGH-EXPLOSIVE BOMBS. German high-explosive bombs are divided into **three** classes. Each has definite identifying characteristics.

* * * * *

b. (Superseded.) **Semi-armor-piercing bombs.** The Germans designate these by the letters "S. D." Their characteristics are given below.
(1) Case construction. The case is constructed usually of a one-piece casting.
(2) Tail construction. Three-piece sheet-steel tail construction consisting of—
(a) Four tail fins.
(b) Sheet-steel cone.
(c) Ring type strut bracing the fins.
c. (Added.) **Armor-piercing bombs.** The Germans designate these by the letters "P. C." Their characteristics are given below.

(1) Case construction. The case is constructed of a heavy streamlined one-piece steel casting or forging.

(2) Tail construction. The tail consists of a two-piece magnesium alloy casting shaped similar to S. D. bomb tail.

[A. G. 300.7 (25 Jan. 44).] (C 1, 20 Mar 44.

94. ANTIPERSONNEL BOMBS. Antipersonnel or fragmentation * * * military and, civilian. Antipersonnel bombs used by the Germans are of **four** types.

* * * * *

c. (Added.) **S. Be. C. 50 and S. Be. C. 250 bombs.** These bombs consist of a steel tube filled with a high-explosive bursting charge and surrounded by a concrete matrix in which are embedded small pieces of steel.

d. (Added.) **The 1-kg. (2⅛ lb.) S. D. 1 bomb.** This bomb consists of a 50-mm mortar shell with tail affixed at rear and impact fuze at nose. This bomb is carried in containers which may hold as many as 700 individual bombs.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

95. INCENDIARY BOMBS.

* * * * *

b. (Superseded.) **Combustible filling type.** This type includes—

(1) The C 250 Flam and C 500 Flam bombs, weighing 110 kg. (220 lb.) and 210 kg. (460 lb.) respectively, have sheet-steel bodies filled with oil.

(2) The 50 kg. Sprengbrand C 50 and brand C 50 bombs have cases similar to general-purpose bombs to assist in penetration without rupture. Filling materials are thermite firepots and phosphorous rubber mixture, respectively.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Table X.—German bombs—Continued (page 90).

Weight		Type	Diameter	Length of body
*	*	* * *	*	*
250	550	----do----		
500	1,100	**S. D. Stg., armor-piercing.** Has only one fuze pocket.	14.5 15.0	36.0 32.5

* * * * * * *

Table X.—German bombs—Continued (page 92).

Weight		Type	Diameter	Length of body
Kilograms	*Pounds*		*Inches*	*Inches*
500	1,100	**S. D. E.,** Semi-armor-piercing. Has only one fuze pocket.	15.6	54.0
500	1,100	**S. D. A.** Semi-armor-piercing. Has only one fuze pocket. Not streamlined.	17.5	54.0
*	*	* *		*
1,000	2,200	**P. C. Armor-piercing.** One fuze pocket.	19.8	57.8
*	*	*	*	*
1,400	3,080	**P. C. Armor-piercing.** One fuze pocket.	22.0	75.0
*	*	* *	*	*

Tail size (inches)	Filling	Illustration
26.0 x 16.0	TNT	Fig. 32 (4).
35.75 x 17.75	Not known	Not shown.
* *	* * * *	*

[A. G. 300.7 (25 Jan 44.))C1, 20 Mar 44.)

Figure 32. (Page 96.) Change to read, *German Bombs, semi-armor-piercing* ***and armor-piercing.***

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

97. HIGH-EXPLOSIVE BOMBS

* * * * *

a. Case construction.

* * * * *

(4) Baseplates are **attached by screws** to the bomb body.

b. Tail assemblies.

* * * * *

(3) Attached to body by either screws, rivets, **or bands.**

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

98. ANTIPERSONNEL BOMBS.

* * * * *

a. Case construction. (Superseded.) Usually consists of either a sheet-steel explosive container wrapped spirally with strip steel or a steel cylindrical exploder tube surrounded by a concrete and steel-pellet matrix, which is contained within an outer steel cylinder.

* * * * *

c. Tail assembly. (Superseded.) Usually consists of four sheet-steel vanes with or without ring strut. Some of the smaller antipersonnel bombs lack tail assemblies.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Table XI.—Color markings (page 98)

Type	Body	Nose
* *	* *	*
High-explosive	Gray, **blue or black**	Red.
Incendiary	Reddish brown **or aluminum**	Red.
* *	* *	*

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Table XII.—Italian bombs—Continued (page 100)

* * * * *

Weight		Type	Diameter	Length of body
Kilograms	*Pounds*	* *	*Inches*	*Inches*
	*		*	*
800	1,760	Time bomb	18.0	Not known.
15	33	Parachute flare	4.0	20.25

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Figure 33. (Page 102.) Change to read, *Italian bombs,* ***anti-personnel.***

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Figure 37. (Page 106.) Change to read, *Italian bombs,* ***high explosive.***

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

101. HIGH-EXPLOSIVE BOMBS. Japanese high-explosive bombs have the following characteristics:

a. Body construction. (1) General-purpose bombs are usually of three-piece steel construction, the nose and tail sections being welded, **riveted or attached by screws, or threaded** to the body.

* * * * *

b. Tail construction.

* * * * *

(2) Cone **always** filled with explosive in general-purpose bombs.

c. Fuzing.

* * * * *

(2) With tail fuzes (screwed into the **apex of the cone or into the baseplate,** depending upon whether or not the cone is filled with explosive).

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

102. INCENDIARY BOMBS. (Superseded.) Certain characteristics of Japanese incendiary bombs are:

a. Case construction. (1) The two 60-kg. incendiaries have the combustible filling contained in an inner case, an exploder tube in the inner casing, and a small ejecting charge in the nose of the outer casing.

(2) The other incendiary bombs are of conventional construction.

b. Function. (1) The two 60-kg. incendiaries will function as follows: Upon impact the fuze will detonate

the expelling charge in the nose of the outer case. This explosion ejects the inner case through the rear of the bomb lighting a delay train as it does so. This delay then ignites the exploder in the inner case, which scatters and ignites the combustible filling. If this type of bomb penetrates too deeply the incendiary charge may burn underground, leaving a trace of the powder on the sides of the shaft.

(2) The other incendiaries function in the conventional manner.

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Table XIII.—Table of Japanese bombs (page 111)

Weight		Type	Diameter	Length of of body
*		* *	*	*
60	**130**	Incendiary	7.9	28.2
*		* *	*	*
50	**110**	Incendiary. High-explosive	7.0	33.0
*		* *	*	*
60	130	General-purpose. High-explosive	9.4	21.0
63	138	**Semi-armor-piercing.** High-explosive.	9.0	25.8
100	220	General-purpose. High-explosive	9.4	31.0
*		* *	*	*
800	**1,760**	Armor-piercing. High-explosive	16.1	48.3

Table XIII.—Table of Japanese bombs—Continued (page 112)

Tail size (inches)	Filling	Illustration
* *	* *	*
18.2 x 9.7	Thermite in electron containers	Fig. 38 (1).
13.5 x 8.25	TNT	Not shown.
15.8 x 9.5	**Hexanite** and anisole mixture or picric acid	Fig. 39 (2).
* *	* *	*
18.3 x 10.6	Mixture of **Hexanite** and anisole	Fig. 39 (3).
* *	* *	*
22.0 x 13.3	**Hexanite** and anisole mixture or picric acid	Fig. 40 (2).
32.4 long	**Hexanite** and anisole mixture	Fig. 40 (1).
37.1 x 19.3	**Hexanite** and anisole mixture	Not shown.
* *	* *	*

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

APPENDIX I
MILITARY EXPLOSIVES

* * * * *

2. TOXICITY.

a. Toxic effects of explosives.

* * * * *

(5) (Superseded.) TNT is toxic and can cause jaundice, dermatitis, anemia, and can deplete the calcium content of the body.

(6) (Added.) Trinitroanisole causes severe cases of dermatitis.

b. Safety precautions.

* * * * *

(1) (Superseded.) Wash the hands with a solution of one teaspoonful of bicarbonate of soda per pint of warm water or G. I. soap and warm water after handling explosives.

* * * * *

[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

Table XVII.—Properties of military explosives—Continued (page 130)

	Trinitrotoluene	Amatol	Trinitrophenol
Remarks	Usually cast loaded but may be pressed or granular for special purposes such as boosters. May exude due to presence of impurities or contact with alcohol. This may cause misfires or premature detonation.	* * *	* * *
	Ammonium picrate	**Trimonite**	**Tridite**
*	* *	* *	* *
Melting point	* *	95°–105 °C	* *
*	* *	* *	* *
Brisance	* *	About 5% less than TNT	About 5% less than TNT.
Velocity	* *	6400 meters/second	6400 meters/second.
Use	* *	* *	By France and Britain as a bursting charge in H. E. bombs.
*	* *	* *	* *

Table XVII.—Properties of military explosives—Continued (page 132)

	Cyclotrimethylenetrinitramine	Torpex
Names	RHX, Hexogen, Cyclonite	
Detonating temperature	290° C	
Velocity	8,400 meters/second	Exact information not available. Should be around 7,500 meters/second.
Use	By Italy and Japan as a booster. **By all nations in bursting charges with various desensitizing agents.**	By U. S. **and Britain** as a bursting charge in mines, torpedoes, and depth charges. **By Germany as a bursting charge in HE bombs.**
Remarks	Has the highest velocity known and is as strong as nitroglycerin. Its use would preclude the necessity of sacrificing strength for brisance in military explosives. Experiments are now being conducted to combine it with other substances for desensitizing it and so that it may be suitably cast or press loaded.	

Table XVII.—Properties of military explosives—Continued (page 134)

	Hexanitrodiphenylamine	**Hexanite**
Names	HND, Hexil, Hexite, Hexamin, **Hexanite**	
Detonating **temperature**		
Brisance		About **5% greater than TNT.**
Velocity		**7,100** meters/second.

Table XVII.—Properties of military explosives—Continued (page 136)

	Trinitroanisole	Hexanite-Anisole Mixture	Trinitrophenylmethylnitramine
Names			Tetryl.
Manufacture	* *	* *	Aniline treated with methyl alcohol to form dimethylaniline. This is nitrated to form tetryl.
Color	Colorless, **pale yellow**	*	**Canary yellow.**
*	* *	* *	* *
Sensitivity	Somewhat **less** than TNT	**Same as picric acid**	Tetryl is of intermediate sensitivity, that is, it can be used successfully in small quantities but in large quantities would be likely to detonate from the impact of rifle fire, set-back, or other moderate mechanical impact.
Brisance	About the same as **TNT**	* *	Tetryl is one of the most brisant of military explosives. Considerably more than TNT.
Velocity	**6,900** meters/second	**7,000** meters/second	* *
Use	* *	* *	By U. S., **Britain, and Japan as a booster.**
*	* *	* *	* *
Reaction with metals.	**Same as picric acid**	**Very slight**	* *
Remarks	* *	* *	High brisance makes it an ideal booster as it will insure a high order of detonation for all types of bursting charges. **Tetryl will irritate the skin much the same as poison ivy.**

Table XVII.—Properties of military explosives—Continued (page 138)

	Pentaerythritetetranitrate	Mercury fulminate	Lead azide
Names	PETN, Penthrite		
Manufacture	PETN—the reaction of formaldehyde, acetaldehyde, and calcium hydroxide forms pentaerythritol. This is nitrated to form PETN.	* *	**A compound of lead and nitrogen.**
Color	**White**	* *	* *
	* * *	* *	* *
Sensitivity	**A little greater than tetryl**	* *	* *
	* *	* *	* *
Use	**By U. S. in primacord detonating fuze. By Germany, Japan, and Russia as a booster. By all nations as a bursting charge in combination with desensitizing agents.**	* *	* *
Stability	**Entirely stable**	Unstable; **decomposes at elevated temperatures, becomes dead-pressed at high pressures and is hygroscopic.**	* *
Reaction with metals.	* *	* *	**Forms copper azide with copper and oxygen.**
Remarks	A so-called super explosive in that it is as strong as nitroglycerin and considerably more brisant than TNT. Work is now in progress to combine with other substances such as TNT for desensitizing and melt loading or suitable press loading.	* *	* *

Table XVII.—Properties of military explosives—Continued (page 140)

	Lead Styphnate	Mercury fulminate	Lead azide
*	* *	* *	* *
Use	**By Germany as a primer. By Germany, Italy, and Russia as a sensitizer in lead azide detonators.**	* *	* *
*	* *	* *	* *

APPENDIX II
DEFINITIONS

1. TERMS COMMON IN BOMB DISPOSAL.

* * * * *

h. Blast. (Superseded.) The rapid expansion at high pressure of gases resulting from an explosion.

* * * * *

p. Bomb reconnaissance agents. (Superseded.) Selected civilians and military personnel trained by disposal officers to investigate, identify, report, and classify unexploded bombs; to indicate the distance (evacuation distance) to which the inhabitants of these areas must be removed for their protection; and to close such roads and institute such protective works as are thought necessary.

* * * * *

t. Booby trap. (Superseded.) Any device installed to operate against personnel or matériel in territory surrendered to the enemy and designed to function by itself to harass or destroy individuals or small groups of the enemy, usually over a long period of time.

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[A. G. 300.7 (25 Jan 44).] (C 1, 20 Mar 44.)

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

OFFICIAL:

J. A. ULIO,
Major General,
The Adjutant General.

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